

## REMARKS

The last Office Action of March 11, 2003 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-17 are pending in the application. Claims 3 and 13 and 14 have been amended. Claims 1, 2 and 8-12 have been canceled. Claims 18-26 have been added. A total of 12 claims are now on file. No claim surcharge is due.

It is further noted that claims 1-17 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16 and 17 stand rejected under 35 U.S.C. §101 as being improper for the recitation of a process.

Claims 1-17 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,587,142 (hereinafter "Horwitz").

Claims 1-3, 5-9, 11-12 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 4,810,405 (hereinafter "Waller").

### REJECTION OF CLAIMS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Applicants have canceled original claims 1, 2 and 4-12 in favor of new claims 18-26 which are written in proper form and language and better encompass the full scope and breadth of the invention. Claim 18 has been

presented in favor of claim 1, now cancelled. Claim 18 as currently drafted is believed to overcome all the rejections due to formality.

Furthermore, applicant asserts that the cancellation of claims 8 to 11 did not affect the scope of new claims 21 to 24 presented herewith and not be considered a narrowing amendment relating to patentability within the meaning of the *Festo*-decision. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 56 USPQ2d 1865 (Fed. Cir. Nov. 29, 2000)(en banc).

The terminology "hydroxy-acid type" has been eliminated from claim 1. Likewise, the term "salty" in claim 2. Claim 6 has been cancelled, thus eliminating the term ATMP. Claim 7 has also been cancelled thereby obviating the formal rejection. With respect to the "wetting agent", applicant respectfully traverses the Examiner's determination that the skilled artisan is not aware of what a wetting agent is. It is submitted that the use of wetting agents are completely rote in the chemical industry and the skilled artisan is any case knowledgeable of the type of wetting agent used in myriad of contexts. Accordingly, applicant has remained with the term wetting agent on the ground that the skilled artisan is certainly apprised of the term and agent in the context as used here.

As a result of the cancellation of claims 1, 2 and 4-12, the rejection under 35 U.S.C. §112, second paragraph has been obviated.

Withdrawal of the rejection of the claims 1-17 under 35 U.S.C. §112, second paragraph is thus respectfully requested.

**REJECTION OF CLAIMS 16 AND 17 UNDER 35 U.S.C. §101.**

The rejected claims have been cancelled so that the rejection thereof is deemed moot.

**REJECTION OF CLAIMS 1-17 UNDER 35 U.S.C. §102(b) AS BEING ANTICIPATED BY HORWITZ.**

The rejection under 35 U.S.C. 102(b) is respectfully traversed.

In order to clearly distinguish the present invention from Horwitz, applicant has cancelled claim 1 and present herewith new claim 18 setting forth a process for the removal of deposits that are precipitated from cold fresh water. Furthermore, the use of a treatment solution comprising a combination of two essential components, that is, a dithionite and/or a disulfite as a reducing agent together with a complexing agent, namely PBTC (2-phosphono butane-1, 2, 4 – tricarboxylic acid) is considered novel and distinguishable over the prior art cited.

It is submitted that the new claims as presented and the claims amendments are supported by the specification

The process as claimed here is directed to deposits that are generated from metal containing components, that is, substantially iron-or manganese containing components occurring in cold freshwater such as wells, sources or fresh water reservoirs. Formation of the deposits is predominantly due to the

action of microorganisms metabolizing iron and/or manganese. It is rare that these deposits are formed by chemical precipitation alone.

However, the deposits formed with the participation of microorganisms are substantially resistant to treatment, so that it is difficult to treat such rust deposits.

It has to be kept in mind that when treating the deposits in drinking water, any type of chemical used has to be safe and so have to be the degradation products. Solvents for treatment that contain any organic agents that can be metabolized by microorganisms repeatedly lead to renewed growth of the microorganism which in turn leads to a rapid renewed formation of deposits.

The above-stated limitations are not taken into account if the object is the mere removal of rust with no regard to potability of the water.

The use of dithionite for the removal of deposits from fresh cold water (i. e. well regeneration) has been proposed prior. However, in practice, utilization could not be established due to dithionite as a solid being sensitive to hydrolysis and developing irritating gases which could lead to self ignition. In addition the dissolved deposits are prone to re-precipitation under admission of air, that is, they were unstable in solution.

Accordingly, the present invention is directed to use complexing agents which improve the solubility of the deposits and which maintains the stability of the deposits in solution. Thus the claimed invention provides an improved deposit removal, break down components that are not metabolized by microorganisms and which is stable even when the used up treatment solution is set free.

Residues that might form are being removed through binding to sediments, so that no water contamination can occur.

Horwitz discloses the dissolution of metal oxide in various industrial settings. However, there is no disclosure that the process relates to the treatment of fresh water supply. The treatment options are listed in col. 1, lines 29-50. Among others, the removal of fittings that are in contact with hot water is mentioned but no disclosure regarding the fresh cold drinking water.

As the Examiner admits, Horwitz teaches a method of dissolving metal oxides using a mixture of polyphosphonic acid and a reductant.

The Horwitz reference does disclose di- and poly phosphonic acid. However, the presently claimed invention is directed a mono-compound, that is, the presently PBTC claimed in new claim 18 is neither a di- nor a polyphosphonic acid but a monophosphonic-tricarboxylic acid. Furthermore, the Horwitz claims are solely directed to sodium formaldehyde hydrosulfoxylate as a reductant.

It is believed that based on the above discussion, the invention as claimed is patentably distinguished over the Horwitz reference.

Withdrawal of the rejection of claims 1-17 under 35 U.S.C. §102(b) is thus respectfully requested.

**REJECTION OF CLAIMS 1-17 UNDER 35 U.S.C. §102(b) AS BEING  
ANTICIPATED BY WALLER**

The Examiner's rejection is respectfully traversed.

With regard to the Waller reference, Waller discloses the combination of a reducing agent on a sulfur basis and a phosphonate which is a di-phosphonic acid and a benzo-triazol-compound as corrosion inhibitor. However sodiumsulfite; sodium thionite or sodiumdisulfite are not disclosed. Waller teaches a method of removing iron oxide deposits from substrates using a phosphonate as a reducing agent.

Similar as in Horwitz, the Waller reference cannot be utilized for drinking water systems. Waller describes the removal of rust (see col. 1, lines 20-31) exclusively in hot water systems and containers in the chemical industry. A microbial precipitation from cold water systems is not disclosed. Both Waller and Horwitz disclose numerous breakdown components that form during treatment. These compounds are however not safe for consumption and hence, that process is not safe for the treatment of drinking water.

Based on the foregoing, the invention in claim 18 patentably distinguishes over the prior art, namely Waller. Since the dependent claims depend directly or indirectly from claim 18, contain all the limitations thereof, they are therefore likewise distinguishable over the prior art in the same manner as claim 18.

Withdrawal of the rejection of claims 1-17 under 35 U.S.C. §102(b) is thus respectfully requested.

## **CITED REFERENCES**

Applicant has also carefully scrutinized the further cited prior art and finds it without any relevance to the newly submitted claims. It is thus felt that no specific discussion thereof is necessary.

It is noted that the Examiner has not made of record the PCT search report. However, it is further noted that the references cited in the PCT search report are currently of record in the present application and as such is of cumulative effect.

## **CONCLUSION**

Applicant believes that when the Examiner reconsiders the claims in the light of the above comments, he will agree that the invention is in no way properly met or anticipated or even suggested by any of the references however they are considered.

None of the references discloses a process for precipitated deposits with the reducing agent and a complexing agent as claimed.

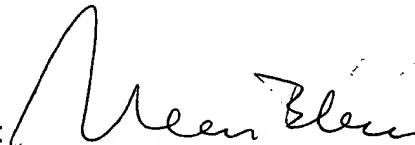
In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

The Commissioner is hereby authorized to charge fees which may be required, or credit any overpayment to Deposit Account No. 06-0502.

Respectfully submitted,

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